



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

Faculty of Engineering & Technology

DEPARTMENT OF CIVIL AND BUILDING ENGINEERING

CERTIFICATE IN CONSTRUCTION TECHNICIAN II (09A)

SEMESTER II EXAMINATIONS

APRIL/MAY 2010 SERIES

EB 1102 : CONSTRUCTION MATERIALS II

TIME: 2 HOURS

Instructions to Candidates

Answer Question **ONE** and any other **TWO** Questions

Question ONE

- (a). (i). Distinguish between the **TWO** commercial products of plastic and give **TWO** examples of each. **(4 marks)**
(ii). State **FOUR** advantages of using plastics as a construction material. **(2 Marks)**
- (b). Describe the following types of glasses:
(i). Wired glass
(ii). Foamed glass
(iii). Rough cast glass **(9 Marks)**
- (c). State **THREE** uses of bituminous products. **(1½ Marks)**
- (d). Explain **THREE** setting ways of adhesives. **(3 Marks)**
- (e). Explain **TWO** kinds of rubber. **(6 Marks)**
- (f). Explain the process involved in repainting woodwork. **(4½ Marks)**

Question TWO (20 Marks)

- (a). Explain **THREE** major uses of plastics in construction industry. **(9 Marks)**
- (b). Explain the following ingredients which are added to plastics:
(i). Solvents
(ii). Plasticizers
(iii). Fillers
(iv). Colouring agent **(8 Marks)**
- (c). List **SIX** defects of painting. **(3 Marks)**

Question THREE (20 Marks)

- (a). (i). Describe the major constituents of paints. **(13 Marks)**
(ii). State **FOUR** functions of paint. **(2 Marks)**

- (b). (i). List the main ingredients used in the manufacture of glass. **(3 Marks)**
(ii). State **FOUR** major uses of glass in the construction industry. **(2 Marks)**

Question FOUR (20 Marks)

- (a). Describe the following types of glues and adhesives:
(i). Animal glues
(ii). Casein glues
(iii). Bituminous adhesives **(9 Marks)**
- (b). Explain lamination method of manufacturing plastics. **(4 Marks)**
- (c). (i). Differentiate between specific adhesion and mechanical adhesion. **(2 Marks)**
(ii). Describe natural bitumen stating its use. **(3 Marks)**
- (d). State **FOUR** properties of mortar. **(2 Marks)**

Question FIVE (20 Marks)

- (a). Describe the following types of lime:
(i). Fat lime
(ii). Quick lime
(iii). Hydraulic lime **(9 Marks)**
- (b). Describe the following types of paints:
(i). Enamel paints
(ii). Hard gloss paints **(6 Marks)**
- (c). Outline the following types of bituminous material:
(a). Coal tar
(b). Pitch **(2 Marks)**
- (d). State **THREE** classes of lime giving **ONE** example for each class. **(3 Marks)**